

REMARKS

INTRODUCTION

In the Office Action, dependent claims 58-69, 80, 81 and 85-90 were objected to as being dependent on rejected base claims, but were indicated as being allowable if rewritten in independent form. Of the remaining claims, claims 1-11, 15-26, 30-39, 42, 43, 45-57, 70-79 and 82-84 were rejected under 35 U.S.C. 102(e) as being anticipated by Lasch et al. (US 2002/0130186 A1), and claims 40, 41 and 44 were rejected under 35 USC 103 as being unpatentable over Lasch et al. Two additional application publications were also made of record but not relied upon; namely, Lasch et al. (US 2002/0145049 A1) (the “‘049 publication”) and Cocco (US 2002/0066790 A1) (the “‘790 publication”).

By the present amendment, objected-to claims 58-69, 81 and 85-90 have been rewritten in independent form, including all the limitations of the base claim and any intervening claims. Also amended are independent claim 74, along with dependent claims 75 and 78. Dependent claims 2-8, 17-23, 33, 35, 36, 39, 40-57, 70-73, 76, 77, 79 and 80 have been cancelled in order to remove rejected subject matter that cannot be traced back to the October 1, 1999 filing date of Applicant’s grand parent application (serial no. 09/411,359) (hereinafter the “‘359 application”), which is now U.S. Patent No. 6,290,137. By virtue of the present amendment, claims 1, 9-11, 15, 16, 24-26, 30-32, 34, 37, 38, 58-69, 74, 75, 78 and 81-90 remain in the application.

The rejections based on Lasch et al. are respectfully traversed. The Lasch et al. patent application publication (hereinafter the “‘186 publication”) was published on September 19, 2002 based on a U.S. patent application (serial no. 10/092,681) filed on March 7, 2002. All of the claims that remain rejected in the present Application following entry of the present Amendment, namely, claims 1, 9-11, 15, 16, 24-26, 30-32, 34, 37, 38, 74, 75 and 78, are entitled

to the October 1, 1999 filing date of '359 application. Thus, the '186 publication cannot be used as a reference unless it is entitled to the benefit of a filing date that is prior to October 1, 1999. The only priority document listed on the cover page of the '186 publication that recites such a filing date is provisional application no. 60/153,112 (hereinafter the '112 provisional application). Its filing date is September 7, 1999, about three weeks prior to Applicant's October 1, 1999 filing date. Unfortunately, as will now be discussed, the disclosure of the '112 provisional application is insufficient to qualify the '186 publication as a reference as of the September 7, 1999 filing date. Likewise, the '112 provisional application is insufficient to qualify the '049 publication of Lasch et al. (which was cited but not applied) as a reference as of the September 7, 1999 filing date. As to the '790 publication of Cocco (also cited but not applied) its earliest claimed priority date is December 3, 1999, some two months after the October 1, 1999 effective filing date of the rejected claims that remain in the present Application. As such, none of the references presently of record qualify as "prior art" relative to Applicant's rejected claims.

EFFECTIVE DATE OF A REFERENCE UNDER 102(e)

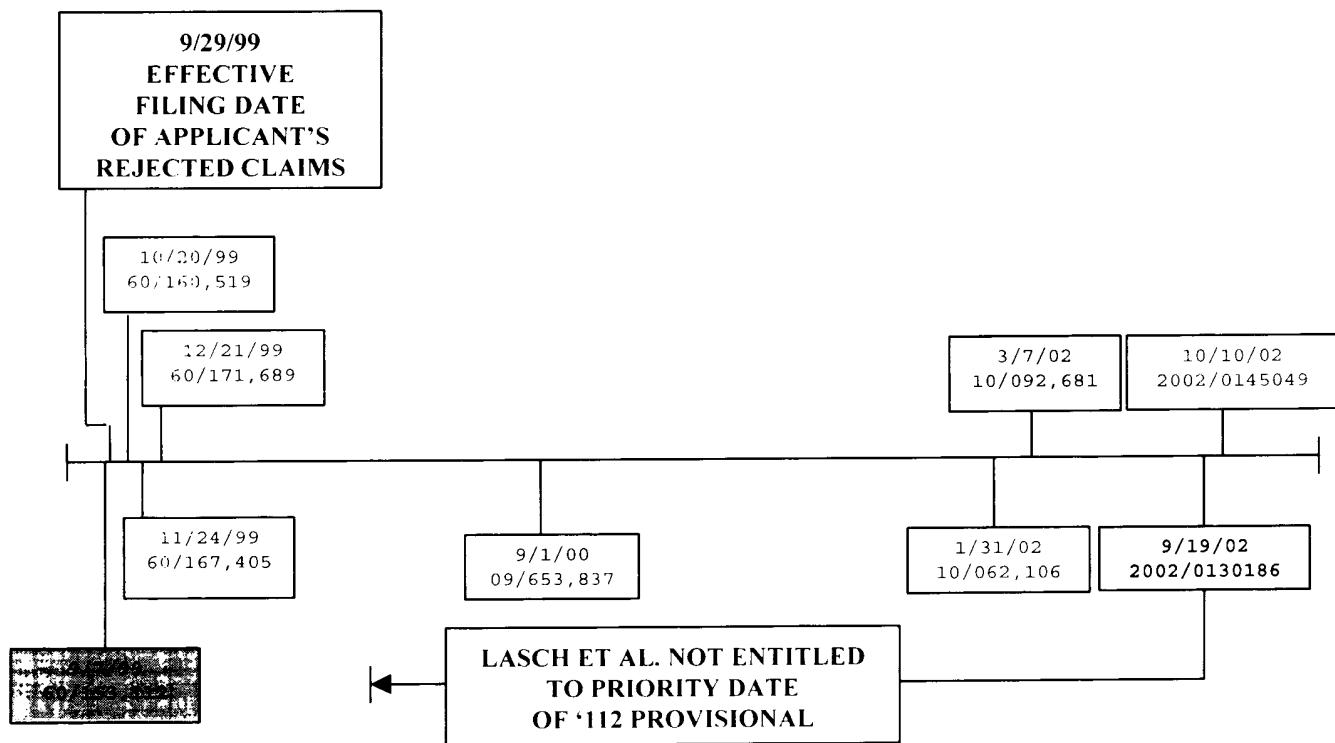
Section 102(e) of the patent statute, as amended by the American Inventors Protection Act of 1999 and the Intellectual Property and High Technology Amendments Act of 2002 (HR 2215), authorizes rejections based on U.S. application publications. As stated at the top of page 8 of the recently issued Revised Examination Guidelines for 35 USC § 102(e), "[T]he § 102(e) date of a reference that did not result from, nor claimed [sic, claim] the benefit of, an international application is its earliest effective U.S. filing date, taking into account any proper priority or benefit claims to prior U.S. applications under §§ 119(e) or 120 *if the prior*

application(s) properly supports the subject matter used to make the rejection.” [Emphasis added].

Under 35 U.S.C. § 119(e), an application for patent is entitled to the filing date of an earlier provisional application only if the provisional discloses the invention claimed in the later application “in the manner provided by the first paragraph of section 112.” In the context of the present case, this means that the September 7, 1999 filing date of the ‘112 provisional application is only available if the provisional “contains a written description of the invention (claimed in the ‘186 publication), and of the manner and process of making, and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.” As described in more detail below, the ‘112 provisional application cannot satisfy either the description requirement or the enablement requirement of § 112, first paragraph, relative to any claim of the ‘186 publication. The same is true relative to the claims of the ‘046 publication of Lasch et al.

A further limitation on the availability of the ‘186 publication (or the ‘046 publication) as a § 102(e) reference stems from the fact that it is based on a continuation-in-part application (serial no. 10/092,681, filed on March 7, 2002), which in turn extends back to the ‘112 provisional application through a chain of four intervening applications, one being a regular application and the other three being provisional applications. *See In re Wertheim*, 209 USPQ 554 (CCPA 1981); MPEP § 2136.03(d) (8th Ed. August 2001). In particular, the March 7, 2002 application (no. 10/092,681) on which the ‘186 publication is based, is a continuation-in-part of application no. 09/653,837, filed on September 1, 2000. Previous to that filing was a provisional application, no. 60/171,689, filed on December 21, 1999. Previous to that filing was another

provisional application, no. 60/167,405, filed on November 24, 1999. Previous to that filing was yet another provisional application, no. 60/160,519, filed on October 20, 1999. It should be noted that the application which led to the '049 publication of Lasch et al. (no. 10/062,106, filed on January 31, 2002), claims priority from the same set of intervening applications. This chain of applications is illustrated graphically below in timeline form. The October 1, 1999 effective date of the present Application's rejected claims is also shown for comparison purposes:



Each application in the chain of applications leading to the '186 publication adds new matter not found in preceding applications. Starting with the '112 provisional application, which contains very little in the way of disclosure (see below), there are three follow-on provisional applications that were rapidly filed within a span of less than four months, each adding new information. The first regular utility application (no. 09/653.837) is then filed about one year later on September 1, 2000, and then the two continuation-in-part applications (nos. 10/062,106

and 10/092,681) are then filed after another year on January 31, 2002 and March 7, 2002, respectively.

When § 102(e) is applied using a reference that is based on a chain of one or more priority applications, and such priority applications contain less disclosure than the reference, it is axiomatic that the priority application whose filing date is sought must itself contain a statutorily sufficient disclosure of the subject matter relied upon to make the rejection. For a rejection based on anticipation, this means that the priority application must disclose the subject matter of each rejected claim. For a rejection based on obviousness, the priority application must render obvious the subject matter of the rejected claims, taken alone or in combination with some other reference. Note that this requirement brings fairness to the patent system by ensuring that the subject matter relied upon in a reference actually antedates the effective filing date of the rejected claims. Were it otherwise, a reference claiming an early priority date with respect to one portion of its disclosure could be applied using another portion of its disclosure that may have added months or even years after the effective filing date of the rejected claims. As described in more detail below, the '112 provisional application does not contain an enabling disclosure of any operable subject matter that would anticipate or render obvious the subject matter of Applicant's rejected claims.

**THE PRESENT REJECTIONS BASED ON 102(e) ARE NOT SUPPORTABLE
DUE TO FATAL DEFICIENCIES OF THE '112 PROVISIONAL APPLICATION**

The Declaration of John H. Kiekhaefer is being filed herewith. As set forth therein, Mr. Kiekhaefer is the Applicant named herein, and is a person who is skilled in the art to which the present Application pertains. (Kiekhaefer Decl., ¶¶ 1-8). As will be established below with support from the Kiekhaefer Declaration, neither the '186 publication nor the '049 publication of

Lasch et al. may be used as a reference against the rejected claims of the present Application because neither publication is entitled to the September 9, 1999 filing date of the '112 provisional application. Insofar as all of the other priority applications referenced in the '186 and '049 publications were filed subsequent to Applicant's effective filing date of October 1, 1999, there is no statutory support for the present rejections.

As outlined above, the problems with the '112 provisional application are two-fold. First, there is a failure to satisfy the disclosure requirement of § 112 relative to any claim of the '186 or '049 publications, as required to establish priority under § 119(e). Second, the '112 provisional application fails to set forth an enabling disclosure that would be sufficient to support any claim of the '186 or '049 publications, as also required under § 119(e). Nor is there is an enabling disclosure of any operable subject matter that would support an anticipation or obviousness rejection of any rejected claim of the present Application. (Kiekhafer Decl., ¶¶ 9-11).

THE DESCRIPTION REQUIREMENT

Section 2163 of the MPEP (8th Ed. August 2001) sets forth the test for satisfying the description requirement of § 112. It states that “[a]n applicant's specification must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, i.e., whatever is now claimed.” MPEP section 2163 goes on to state that, where a continuation or continuation-in-part application is involved, “[t]he test for sufficiency of support in a parent application is whether the disclosure of the application relied upon “reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.” (citing *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

As further noted by Judge Miller in his dissent in the *Ralston Purina* case, the disclosure must constitute a “legal” equivalent of the claim language such that the claim language is the “necessary and only reasonable construction” to be given to the disclosure in the parent application by one skilled in the art.” (quoting *In re Filstrup*, 116 USPQ 440, 442 (CCPA 1958). As also stated by Judge Miller, “[s]ection 112 does not refer to a mere ‘support’ standard.” Rather, “[t]he original disclosure may not be relied upon unless it ‘constitute[s] a full, clear, concise and exact description . . . of the invention claimed’ in the patent to one of ordinary skill.” (quoting *In re Smith*, 173 USPQ 679, 683 (CCPA 1972). In other words, “[t]he result claimed must ‘inevitably occur’” from the disclosure in question. (quoting *Kooi v. DeWitt*, 192 USPQ 268, 273 (CCPA 1976).

**LACK OF DESCRIPTIVE SUPPORT FOR THE CLAIMS
OF THE ‘186 AND ‘049 PUBLICATIONS**

There are four independent claims in the ‘186 publication, namely claims 1, 14, 20 and 43. Each of these independent claims has associated dependent claims defining four claim groups, namely claims 1-13, 14-19, 20-42 and 43-47. There are two independent claims in the ‘049 publication, namely claims 1 and 24. Each of these independent claims has associated dependent claims defining two claim groups, namely, claims 1-23 and 24-28. Summarizing in advance, the respective claim groups of the ‘186 and ‘049 publications are all directed to embodiments that are present in the ‘186 and ‘049 publications but which are not mentioned in the ‘112 provisional application. In particular, the four claim groups of the ‘186 publication are all based on paragraphs 0071-0079 and Figures 7A-7I of the ‘186 publication (note that Figs. 7G, 7H and 7I are mentioned in the text but are missing from the ‘186 publication). The two claim groups of the ‘049 publication are all based on paragraphs 0072-0077 and Figures 7A-7I of the

‘049 publication. Note that paragraphs 0071, 0072, 0074, 0075, 0078 and 0079 of the ‘186 publication are respectively identical to paragraphs 0072-0077 of the ‘049 publication, and that Figures 7A-7F of the ‘186 publication are respectively identical to Figures 7A-7F of the ‘049 publication. (Kiekhafer Decl. ¶ 12).

The above-referenced portions of the ‘186 and ‘049 publications deal with cards that comprise plural layers made from a combination of polyvinylchloride (PVC) and polyethyleneterephthalate (PET) polymers, including a PET IR blocking film manufactured by 3M Company. The ‘186 publication further mentions adhesive bonding of the PVC and PET layers using polyester adhesive material (paragraph 0073) and the use of a coextrusion and lamination process (paragraphs 0076-0077). In particular, an acid-modified ethylene-vinyl-acetate (EVA)-based material is coextruded on each side of a PET IR blocking optical film to form a 3-layer subassembly. The 3-layer subassembly is then laminated on each side to a printed PVC layer. In paragraph 0077, the use of conventional extrusion and coextrusion equipment to process polyethylene resins is described. (Kiekhafer Decl. ¶ 13).

The independent claims of the ‘189 and ‘046 publications are recited below. Subject matter not supported by the ‘112 provisional application includes the italicized portions of the text.

CLAIMS OF THE ‘186 PUBLICATION

Independent claim 1 of the ‘186 publication reads as follows:

1. A transaction card comprising:
a first layer comprising a first polymer wherein the first layer further comprises a machine recognizable compound;
a second layer extrusion coated to said first layer,
wherein said card is transparent or translucent.

There is no mention of extrusion coated layers in the '112 provisional patent application. The only discussion of layer attachment is found at page 7, line 30 – page 8, line 1, and at page 10, line 26 - page 11, line 5. The passage beginning on page 7 is directed to the front and back sheets 10 and 12, and mentions "... combining the sheets (step 106), by preferably adhering the front sheet 10 on top of the back sheet 12 . . ." The passage beginning on page 10, line 26 is directed to the front and back sheets 10 and 12, and also discusses the application of a laminate material over the sheets 10 and 12. It is mentioned at page 10, lines 26-28 that the sheets 10 and 12 "... are preferably adhered together by any suitable adhering process, such as a suitable adhesive." Beginning at page 10, line 32, it is stated that "... after adhering the sheets together, a sheet of known in the art laminate material . . . is applied over the front 10 and the back 12 of the card 5." As stated at page 11, lines 3-5, the "... card 5 layers are suitably compressed at a suitable pressure and heated at about 400 degrees with a suitable dwell time to create a single card 5 device." None of the foregoing passages contains any hint of an extrusion coating process being proposed for the manufacture of a transaction card. Nor is extrusion coating used by the transaction card industry. Indeed, transaction cards are commonly made from PVC whereas the extrusion process described in the '186 publication is for polyethylene resins. The subject matter of claim 1 of the '186 publication thus defines subject matter that is not clearly conveyed in the '112 provisional application, and it would be apparent to persons skilled in the art that the applicant was not in possession of the claim 1 subject matter at the time the '112 provisional application was filed. (Kiekhaefer Decl. ¶ 16).

Dependent claims 2-13 of the '186 publication add further limitations to independent claim 1 pertaining to the various specific layers that may be incorporated into a transaction card. (Kiekhaefer Decl. ¶ 17).

Independent claim 14 of the '186 publication reads as follows:

14. A method of making a card comprising the steps of: providing a first layer comprising a machine readable compound; *coextruding a second layer to said first layer*, wherein said card is transparent or translucent.

There is no mention of coextruding a second layer onto a first layer in the '112 provisional patent application. Nor are coextruding processes used by the transaction card industry. Indeed, transaction cards are commonly made from PVC whereas the coextrusion process described in the '186 publication is for polyethylene resins. As set forth above, the '112 provisional application only discusses adhering of the front and back sheets 10 and 12 in a general sense, and subsequent lamination of laminate material to the front and back sheets. The subject matter of claim 14 of the '186 publication thus defines subject matter that is not clearly conveyed in the '112 provisional application, and it would be apparent to persons skilled in the art that the applicant was not in possession of the claim 14 subject matter at the time the '112 provisional application was filed. (Kiekhaefer Decl. ¶ 19).

Dependent claims 15-19 of the '186 publication add further limitations to independent claim 14 pertaining to the various specific layers that may be incorporated into a card. (Kiekhaefer Decl. ¶ 20).

Independent claim 20 of the '186 publication reads as follows:

20. A card comprising: a plurality of layers wherein a *first layer comprises a first polymer* and a *second layer comprises a second polymer* wherein the second layer further comprises a machine recognizable compound, wherein said plurality of layers is transparent or translucent and further wherein said plurality of layers are *laminated* together.

There is no mention of using first and second layers comprising first and second polymers in the '112 provisional application, or that such first and second layers should be laminated together. On page 7, line 29 of the '112 provisional application, it is first stated with respect to the front and back sheets 10 and 12 that "[e]ach sheet 10, 12 is substantially identical . . ." There is no mention of using different materials for each sheet, such as first and second polymers. Moreover, as described above, the front and back sheets 10 and 12 are not laminated together. Rather, it is stated on page 10, lines 27-28 of the '112 provisional application, the front and back sheets 10 and 12 are merely ". . . adhered by any suitable adhering process, such as a suitable adhesive." The only mention of lamination in the '112 provisional application is in connection with the laminate material applied to the front and back sheets 10 and 12, as described at page 10, line 32 – page 11, line 5. There is no mention of the laminate material being a second polymer that is laminated to a first polymer represented by the front or back sheets 10 or 12. Indeed, there is no indication in the '112 provisional application that the laminate material should be any different from the material used for the front and back sheets. Moreover, in the transaction card industry, the core and laminate sheets are usually both made from the same material. The subject matter of claim 20 of the '186 publication thus defines subject matter that is not clearly conveyed in the '112 provisional application, and it would be apparent to persons skilled in the art that the applicant was not in possession of the claim 20 subject matter at the time the '112 provisional application was filed. (Kiekhaefer Decl. ¶ 22).

Dependent claims 21-42 of the '186 publication add further limitations to independent claim 20 pertaining to the various specific layers that may be incorporated into a card. (Kiekhaefer Decl. ¶ 23).

Independent claim 43 of the '186 publication reads as follows:

43. A method of making a card comprising the steps of: bonding a plurality of layers together wherein said plurality of layers comprises a *first layer of a first polymer* and a *second layer of a second polymer* wherein said second layer comprises a machine readable compound and further wherein said plurality of layers are transparent or translucent.

As stated above, there is no mention of using first and second layers comprising first and second polymers in the '112 provisional application. The subject matter of claim 43 of the '186 publication thus defines subject matter that is not clearly conveyed in the '112 provisional application, and it is apparent to me that the applicant was not in possession of the claim 43 subject matter at the time the '112 provisional application was filed. (Kiekhaefer Decl. ¶ 25).

Dependent claims 44-47 of the '186 publication add further limitations to independent claim 43 pertaining to various pressure conditions, and in claim 47 the use of a machine recognizable ink is mentioned. (Kiekhaefer Decl. ¶ 26).

CLAIMS OF THE '049 PUBLICATION

The claims of the '049 publication are fairly similar to the above discussed claims of the '086 publication.

Claim 1 of the '049 publication reads as follows:

1. A card comprising: a plurality of layers wherein a *first layer comprises a first polymer* and a *second layer comprises a second polymer* wherein the second layer further comprises a machine recognizable compound, wherein said plurality of layers is transparent or translucent.

As stated above, there is no mention of using first and second layers comprising first and second polymers in the '112 provisional application. The subject matter of claim 1 of the '049 publication thus defines subject matter that is not clearly conveyed in the '112 provisional

application, and it is apparent to me that the applicant was not in possession of the claim 1 subject matter at the time the '112 provisional application was filed. (Kiekhaefer Decl. ¶ 29).

Dependent claims 2-23 of the '049 publication add further limitations to independent claim 1 pertaining to the various specific layers that may be incorporated into a card. (Kiekhaefer Decl. ¶ 30).

Claim 24 of the '049 publication reads as follows:

24. A method of making a card comprising the steps of: disposing a plurality of layers together wherein said plurality of layers comprises *a first layer of a first polymer and a second layer of a second polymer* wherein said second layer comprises a machine readable compound and further wherein said plurality of layers are transparent or translucent; and *laminating said plurality of layers together.*

As stated above, there is no mention of using first and second layers comprising first and second polymers in the '112 provisional application. Moreover, as described above in paragraph 14, the front and back sheets 10 and 12 are not laminated together. The subject matter of claim 24 of the '049 publication thus defines subject matter that is not clearly conveyed in the '112 provisional application, and it is apparent to me that the applicant was not in possession of the claim 24 subject matter at the time the '112 provisional application was filed. (Kiekhaefer Decl. ¶ 33).

Dependent claims 25-28 of the '049 publication add further limitations to independent claim 24 pertaining to various pressure conditions, and in claim 47 the use of a machine recognizable ink is mentioned. (Kiekhaefer Decl. ¶ 34).

THE ENABLEMENT REQUIREMENT

Section 2164 of the MPEP (8th Ed. August 2001) sets forth the test for satisfying the enablement requirement of § 112. It states that “[a]ny analysis of whether a particular claim is

supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention.” (MPEP § 2164.01). This statutory test has been interpreted as including a prohibition against undue experimentation. “Accordingly, even though the statute does not use the term ‘undue experimentation,’ it has been interpreted to require that the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation.” (MPEP § 2164.01). Section 2164.01(a) of the MPEP sets forth the factors to be considered in determining whether or not the amount of required experimentation is undue or unreasonable. These factors include: (1) the quantity of experimentation necessary (time and expense); (2) the amount of direction or guidance presented; (3) the presence or absence of a working example; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skills of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims.

LACK OF ENABLING DISCLOSURE

As previously stated, it is the opinion of Applicant that the ‘112 provisional application lacks an enabling disclosure of the claimed subject matter of the ‘186 and ‘049 publications. Moreover, as also stated, the ‘112 provisional application fails provide an enabling disclosure of the subject matter of the rejected claims of the present application. (Kiekhafer Decl. ¶ 34).

In order for a document to stand as prior art, what is presented needs to be correct and adequately described technically. The mere writing of an invention description does not necessarily make it a physical reality or technically feasible. Statements made need to be supported by cited documentation that can be checked. There are serious problems in these

regards with much of this “mere writing” in the above-referenced ‘112 provisional patent application. Overall, the ‘112 provisional application is a description of a market need, a loose rambling of ideas, theoretical processing, a discourse of background information (some of which is wrong), and a technically incorrect attempt to describe an invention that is not the same as the claimed subject matter of the ‘186 and ‘049 publications or the rejected subject matter of the present application. (Kiekhaefer Decl. ¶¶ 35-36).

First and foremost, the ‘112 provisional application fails to adequately show how to make a transaction card that is transparent or translucent to visible light but has sufficient opacity relative to infrared light to render the card recognizable or detectable by an ATM or other machine that detects a card by way of infrared source and detector elements disposed on opposing sides of the card. (Kiekhaefer Decl. ¶ 37).

In particular, the ‘112 provisional application repeatedly specifies that the card should be made with a material that absorbs infrared light but reflects all other light. This would result in a card that is opaque and not transparent or translucent. (Kiekhaefer Decl. ¶ 38).

The first such passage is found at page 6, lines 10-13 of the ‘112 provisional application, in the section entitled “Brief Summary of the Invention,” and states as follows (emphasis added by italics):

“The card is optically recognizable by an invisible infrared ink which is distributed over the card’s surface, or alternatively by a hot mirror residing between the card sheets, *thereby allowing the card to absorb infrared light and reflect all other light.*”
(Kiekhaefer Decl. ¶ 39).

The second passage specifying the use of an infrared absorber that reflects all other light is found at page 7, lines 14-18 of the ‘112 provisional application, in the section entitled “Detailed Description of Detailed Embodiments” (emphasis added by italics):

“The optically recognizable element on transparent card 5 is *a substantially invisible infrared ink which absorbs infrared light but reflects all other wavelengths of light*. Alternatively, the optically recognizable element is *a hot mirror which also absorbs infrared light but reflects all other wavelengths of light*.”

(Kiekhaefer Decl. ¶ 40).

The third passage specifying the use of an infrared absorber that reflects all other light is found at page 9, lines 12-31 of the ‘112 provisional application, again within the section entitled “Detailed Description of Detailed Embodiments” (emphasis added by italics):

“With respect to the optically recognizable ink, one skilled in the art will appreciate that the optically recognizable ink is any chemical, solution, dye, ink substrate, material and/or the like which is recognizable by a sensor. In a preferred embodiment, the optically recognizable ink is an infrared ink which absorbs light, but reflects other wavelengths of light.”

“Alternatively, the optically recognizable element is a hot mirror which also absorbs infrared light but reflects all other wavelengths of light.”

(Kiekhaefer Decl. ¶ 41).

What is significant about the foregoing passages is that they represent the totality of the ‘112 provisional application’s discussion of the disclosed “optically recognizable material.” Thus, there is a fundamental technical error in the ‘112 provisional application that renders the disclosed card inoperable for its intended purpose. The only card that could ever be produced in accordance with the ‘112 provisional application is one that reflects visible light and is thus opaque in the visible range. (Kiekhaefer Decl. ¶ 42).

A further deficiency of the ‘112 provisional application is that it fails to disclose how to obtain or make any particular infrared absorbing material without undue experimentation. The only reference to any source of infrared absorbing ink material is found on page 9, lines 16-22 of the ‘112 provisional application, in the section entitled “Detailed Description of Detailed Embodiments,” where reference is made to an offshore company located in Switzerland:

“The infrared ink may be obtained from, and applied to card 5 by, for example, the Sicipa Company with headquarters at: SICPA Management S.A., Avenue de Florissant 41, 1008 Prilly, Switzerland. Tel: +41 (21) 627 55 56.”
(Kiekhaefer Decl. ¶ 43).

A check of the SICPA product line reveals that it has many inks for sale. The fact that no particular ink is specified in the ‘112 provisional application would challenge one who is attempting to produce a transparent or translucent transaction card with infrared light filtering ability. (Kiekhaefer Decl. ¶ 44).

A further complication is that the ‘112 provisional application does not explain how to prepare an infrared ink so that it may be applied to a transaction card. On page 9, lines 24-26 of the ‘112 provisional application, it is confusingly explained that:

“Because infrared ink is a thicker, heavier ink, the infrared ink is mixed with a standard silk screen clear ink and applied to card 5 by a silk screening process.”
(Kiekhaefer Decl. ¶ 45).

It is not apparent what a “standard silk screen clear ink” is, and the ‘112 provisional application does not identify any particular product. Nor does the ‘112 provisional application explain what the mixing ratio of the infrared and clear inks should be in order to obtain a desired viscosity, or what effect the mixing has on the opacity of the infrared ink, or whether the ink mixture is compatible with subsequent lamination. (Kiekhaefer Decl. ¶ 46).

Regarding lamination, it is notable that an impossibly high temperature is recommended on page 11, lines 2-5 of the ‘112 provisional application, as follows:

“After the laminate is applied over the front 10 and back 12 of the combined plastic sheets (step 108), card 5 layers are suitably compressed at a suitable pressure and heated at about 400 degrees with a suitable dwell to create a single card 5 device.”
(Kiekhaefer Decl. ¶ 47).

The use of a lamination temperature of 400 degrees (Centigrade or Fahrenheit) would liquefy any laminate made from the PVC sheet stock commonly used to manufacture transaction cards. (Kiekhaefer Decl. ¶ 48).

There is no description of any particular hot mirror product to use in making a transaction card in accordance with the '112 provisional application. It is only stated that the hot mirror should "absorb" infrared light. However, a hot mirror by all scientific descriptions, reflects infrared light. (Kiekhaefer Decl. ¶ 49).

A further anomaly in the '112 provisional application is that it describes at page 8, line 1 a 42mm thick card. Since 25.4 mm = 1 inch, the described card is actually 1.65" thick. This is not within the ISO thickness standard for transaction cards. Actually, what is described is not a card but a paperweight. Even if one places a decimal before or within the number, it is not an ISO thickness card. (Kiekhaefer Decl. ¶ 50).

As stated above, the factors to consider when determining whether one skilled in the art could make an invention based on a disclosure without undue experimentation are (1) the quantity of the experimentation necessary (time and expense), (2) the amount of direction or guidance presented, (3) the presence or absence of a working example, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skills of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. It is the opinion of Applicant that all of these factors point to a conclusion of undue experimentation. (Kiekhaefer Decl. ¶ 52).

As to the first factor, the quantity of experimentation, the amount of time and cost for experimentation is incalculably high because the '112 provisional application erroneously instructs that an ink or hot mirror which absorbs infrared light while reflecting all other

wavelengths should be used. Even assuming a person skilled in the art was able to locate such as composition and successfully apply it in a transaction card construction, the material would never produce a card that is transparent or translucent. No amount of experimentation would change that fact. (Kiekhafer Decl. ¶ 53).

Assuming, moreover, for the sake of argument that the '112 provisional application had properly stated that the infrared light absorber should transmit all other wavelengths, the experimentation required to identify a workable light absorber and successfully incorporate it into a card would have been undue. Applicant knows this from experience insofar as his own development of a transaction card as claimed in the present application took many weeks of trial and error testing in order to determine, among other things, (a) which materials provided the required combination of optical blocking at the desired infrared wavelengths and optical transmission in the visible range, (b) how the materials should be mixed with carrier vehicles and at what concentrations when applied to a core sheet, (c) how many layers of the mixture should be applied for optimal functionality, (d) how thick the layers should be, (e) whether the selected materials were compatible with lamination processes, and (f) whether the selected materials were stable (e.g., would not become discolored) when incorporated in a card and exposed to environmental conditions such as ultraviolet light, etc. (Kiekhafer Decl. ¶ 54).

As to the second factor, the amount of direction or guidance presented, the '112 provisional application provides little direction or guidance as to how to create the desired card, and in fact leads the public in the wrong direction. Again, as previously noted, the '112 provisional application incorrectly instructs that the infrared light absorber should reflect light in all other wavelengths. Even if this error is overlooked, and it is assumed that the '112 provisional application had properly stated that the infrared light absorber should transmit all

other wavelengths, the remaining direction and guidance supplied by the application relative to the production of a working card is almost nonexistent. We are informed that either an infrared absorbing ink or a "hot mirror" may be used, and the name of a company that produces inks is mentioned. No particular ink or hot mirror specifications are mentioned, other than to state at page 9, lines 21-22 of the '112 provisional application that a minimal blocking wavelength of 770 nm is needed. Mixing of the infrared ink with a "standard silk screen ink" is suggested at page 9, lines 24-26. However, no particular "standard silk screen inks" are mentioned and no mixing ratios are specified. (Kiekhaefer Decl. ¶ 55).

As to the third factor, the presence or absence of a working example, no such example is set forth in the '112 provisional application. (Kiekhaefer Decl. ¶ 56).

As to the fourth factor, the nature of the invention, it is noted that the development of a workable card having the properties claimed in the present application is not a routine matter, and the success of any particular light absorbing material is not predictable. Rather, as stated, much trial and error is required to produce satisfactory results. (Kiekhaefer Decl. ¶ 57).

As to the fifth factor, the state of the prior art, there are no prior art references that address the problem solved by the present invention. There are only a handful of patents of record herein that even discuss the use of infrared responsive materials in a card, and these references all deal with the encoding of cards using code patterns. (Kiekhaefer Decl. ¶ 58).

As to the sixth factor, the relative skills of those in the art, it is Applicant's opinion that the average person skilled in the art which his invention pertains has a bachelors degree in chemistry and industrial experience in the manufacture of transaction cards. Such a person would not be expected to have significant experience in the art of optically-responsive inks or dyes and would certainly not be able to select, without undue experimentation, an ink or dye that

provides the transaction card optical properties claimed in the present Application and which adequately functions for the card's intended purpose. (Kiekhaefer Decl. ¶ 59).

As to the seventh factor, the predictability or unpredictability of the art, it is Applicant's opinion that the issue of whether any particular infrared blocking material would function satisfactorily according to the claims of the present invention is not predictable. Nor can it be predicted without undue experimentation how a selected material should be mixed and applied to a card to obtain the desired results. As stated, this is strictly a matter of trial and error. (Kiekhaefer Decl. ¶ 60).

As to the eighth factor, the breadth of the claims, it is noted that the claims the present Application that were rejected under the '186 publication have a range of scope. Many of the dependent claims have additional limitations that are nowhere shown or described in the '112 provisional application. By way of example only, consider rejected claims 15 ("light filtering material disbursed through all or a portion of said material sheet"), 30 ("light filtering material disbursed through all or a portion of said material sheet"), 34 ("light absorbing dye material dissolved in a liquid coating material at a dye-to-coating weight ratio of between about 0.2-5.0%") and 37 ("liquid coating comprises a plastic resin-based coating material"). (Kiekhaefer Decl. ¶ 61).

CONCLUSION

As demonstrated above, with support from the accompanying the Kiekhaefer Declaration, the present rejections based on the Lasch et al. '186 publication must fail because the September 7, 1999 filing date of the '112 provisional application referenced by Lasch et al. is not available to the cited reference. Rather, due to the above-enumerated disclosure deficiencies of the provisional application, the earliest priority date to which the '186 publication (or the Lasch et al.

‘046 publication) could ever be entitled is subsequent to the October 1, 1999 priority date of the rejected claims remaining in the present Application.

As such, Applicant respectfully requests that the rejections based on Lasch et al. be withdrawn, and that Notices of Allowability and Allowance be duly issued.

Respectfully submitted,



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